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Weekly Bulletin

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EDITOR

Sunlight As An Aid to Child Health.

An article upon the use of sunlight with relation to child health, published in the Weekly Bulletin for August 28, brought a large number of favorable comments. As a result, more information upon this subject supplied by the Children's Bureau, is published here.

THE ULTRA-VIOLET RAYS OF THE SUN.

Sunlight, as we see it, is only a very small part of the radiations given off from the sun. When the visible light from the sun passes through a prism it is broken up into its component parts to form the well-known spectrum of colors, red, orange, yellow, green, blue, and violet. Beyond each end of this visible spectrum there are invisible radiations; at the red end, the heat waves; at the violet end, the ultra-violet rays. The ultra-violet radiations are few in number compared to the heat and visible light, but it is these rays which are of such importance to animal life, destroying bacteria, stimulating the healing process in tuberculosis, and preventing or healing rickets. The intensity of these ultra-violet radiations as they reach the earth's surface varies greatly with the season of the year and with the condition of the atmosphere. In the north temperate zone the intensity is greatest when the sun has reached the most northern point in its circuit, that is about June 21, and least when the sun has reached the most southern point, December 21. During the day it has been shown that the intensity is greatest between ten and two o'clock. If the day is cloudy or if there is smoke or dust in the atmosphere, the intensity of the radiation is greatly diminished. Ultra-violet radiation is less, therefore, in congested smoky cities than in the open country. When the radiations from the sun pass through solid substances certain rays are filtered out. Black silk, for instance, will permit the passage of heat rays, but is opaque to the visible and ultra-violet rays. Window glass permits the passage of visible rays and heat rays, but is opaque to the ultra-violet rays. By dressing ourselves in heavy clothing and by living behind glass windows we are depriving ourselves effectually of most of these valuable ultra-violet radiations. It is only when the rays strike directly on the bare skin that they can be absorbed by the body. Pigmentation of the skin is the evidence that the body is reacting to the radiations. Ultra-violet radiations of great intensity may be produced artificially by a mercury vapor quartz lamp or carbon arc lamp and may be used therapeutically as sunlight is used, though in smaller doses.

SUNLIGHT AS A PREVENTIVE OF RICKETS.

The need to prevent rickets among young infants can not be emphasized too much. In the central and northern states rickets in a greater or less degree is a nearly universal condition among young infants, whether breast or artificially fed. Approximately one-third of all city children show either moderate or severe deformities of rickets. It is true that the most severe cases are found among the dark-skinned races, but mild and moderate degrees of the disease occur among the fair-skinned races to an extent not realized until recently when the x-ray has been used to help make the diagnosis. If these fair-skinned infants receive antirachitic treatment, that is, if they are taken outdoors into the direct sunlight and if they are given the antirachitic factor in cod-liver oil, the mild degree of rickets demonstrable by X-ray will not develop into a more severe degree. Dark-skinned infants probably need longer exposure to the sunlight and perhaps larger doses of cod-liver oil to attain the same degree of control of rickets as fair-skinned infants. This may be due to the fact that the natural pigmentation of their skin, acquired as protection from the intense sunlight of the South, overprotects them from the northern sunlight. If rickets is not allowed to advance beyond a slight degree there are probably few if any bad results. It is the rickets which is allowed to go untreated which carries deformities in its wake and with which anemia, bronchitis, pneumonia and sometimes convulsions are associated. Bony deformities of the extremities such as bow legs, severe knock-knees, and flat foot are to be deprecated because they interfere with the correct use of the body; bony deformities of the chest are frequently associated with chronic bronchitis and recurring pneumonia; bony deformities of the pelvic bones are responsible for a large proportion of difficult and operative deliveries of women in childbirth, to say nothing of injuries to the infant during such difficult delivery. A large percentage of convulsions of infants under one year of age is due to tetany, a condition associated with rickets. Babies with rickets are particularly prone to respiratory infections, to anemia, to malnutrition. If rickets can be controlled from its very incipiency in the first months of life these untoward results will be avoided.

FEWER CLOTHES—MORE SUN—FOR BABIES.

The institution of sun baths for babies and young children in any American community is not easy because tradition and convention have been opposed to them for many generations. Climatic conditions in many parts of this country make warm clothing a necessity during the winter season. During the spring, summer, and fall, however, babies and little children wear much more clothing than is necessary. One has only to take off a baby's or a little child's clothes and watch him play in the sun to know that it is convention and not instinct which demands clothes at this age. Tradition also says that sunlight may injure a baby's eyes. If the baby's face is turned so that the eyes look away from the sun or if the older child wears a cotton shade hat in hot weather, the eyes will not be injured. Old traditions and conventions are hard to break. New traditions and conventions must be established by small groups and slowly the rest of the community will follow.

The technique of the sun bath will vary somewhat according to locality, climate, season, weather and facilities in the home. Sunlight is free to all and sun baths can be given to all babies at some season of the year. Southern babies can have outdoor sun baths the year around. Northern babies are less fortunate, but even in our climate partial sun baths can be given nearly all the year and complete sun baths all the summer months. In practically all parts of the United States, preliminary outdoor sun baths can be started by the first of March. A corner of the yard or porch should be selected where the morning sun shines warmly, but where the child will be protected from the wind. Here the baby's hands and face and head may be exposed to the sun for varying lengths of time beginning with five or ten or even fifteen minutes and increasing gradually during the month as the sun gets warmer. If the baby is turned first on one side and then on the other, both cheeks may be exposed without injury to the eyes. The hands may be exposed, at first, one at a time, later both together. The bonnet may be pushed daily further back until the whole head is exposed. In many parts of the country these preliminary sun baths may be started in February or even January. During these sun baths in early spring, sunburn need not be feared because the intensity of the sunlight is not yet very great. Later in the season shorter exposures may be necessary at first.

THE SPRING SUN BATH FOR THE BABY.

As the spring days get warmer, usually by the first of April, the area of the baby's skin exposed to the sun may be increased by rolling up the sleeves to the elbow for five or ten minutes. Each week thereafter the duration of the sun bath on head and arms may be increased five or ten minutes, the amount depending on the rapidity with which pigmentation or tanning takes place. Early in April, depending somewhat on the climate or weather, the stockings may be taken off, at first one at a time, later both together, for five or ten minutes each, thus exposing the leg and knee to the sun. The period of exposure of the legs must increase five or ten minutes weekly thereafter. By approximately the middle of May, when the baby's arms and legs have become accustomed to the sun baths and are tanned, more of the body can be exposed. The jacket and dress may be taken off for five minutes each day for a week, thus exposing the shoulders and neck as well as the arms and legs. As with the arms and legs the period of exposure of the neck and shoulders should increase five to ten minutes each week. By the end of May the sun bath may be given with all clothes off except the band and diaper, and by the first or second week of June the baby may receive complete sun baths with no clothing. Care must be taken to gradually accustom each new part of the skin to the sunlight by starting with five minute exposure and increasing by five or ten minute amounts each week. By the first of June the face, head, arms, and legs may be exposed for approximately an hour, whereas the complete sun bath including the trunk will only last five or ten minutes. By the end of June, however, the complete sun bath may be given for from one-half to a whole hour.

SUMMER AND WINTER SUN BATHS FOR BABIES.

Pigmentation or tanning of the skin and not sunburn is the end for which to strive in giving sun baths to babies. No absolute rule can be laid down as to how long this will take. The baby with fair skin will require shorter exposures at first in order to avoid sunburn, but may be given more frequent sun baths, possibly twice or even three times a day, in order to hasten pigmentation. The baby with dark hair and dark skin will pigment more rapidly and longer exposures can be safely given. Negro babies may have twice as long exposures as white babies. Older children can usually have longer initial exposures than young babies. A general schedule such as this may be followed fairly closely, but no schedule will serve for all babies, and common sense must be used at all times to avoid sunburn.

During the spring months sun baths are best given between ten and one, but during the hot summer months they should be given earlier in the morning between eight and eleven. Once the child's body has become well tanned he can play in the sun several hours, provided he wears a light cotton shade hat. During the extreme heat of July and August it is better that the child should play in the shade between eleven and three. A child accustomed to complete sun baths in the summer can continue them late into the fall and can have partial sun baths on all sunny days in the winter. Outdoor sun baths may be started as described at any time during the spring, summer, or fall, but the duration of these initial exposures must depend on the season, those of the spring and fall being longer than those of July and August.

In the northern states during the winter months from November to March it is often difficult to give outdoor sun baths to very young babies. The heat of the sunlight which we would so gladly dispense with in July and August must be used to its greatest extent in winter and spring. It has been found that the temperature in winter may be forty or more degrees higher in the direct sunlight in a place protected from the wind than in the shade. Babies born in the winter should sleep as often as possible outdoors in the sun during the morning nap and the sun be allowed to shine on the cheeks and face. During these months, moreover, partial sun baths may be given to babies indoors lying inside an open window. The window may be opened at the top or at the bottom, but it is important that the baby lie in the patch of sunlight which has come through the open space. During the indoor sun bath it is best to close the doors of the room to avoid drafts. The same technique may be used for the indoor sun bath as for the outdoor. Babies who have become accustomed to indoor sun baths in winter can begin outdoor sun baths in February or March.

(Continued in Next Issue.)

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Death Comes to Dr. N. K. Foster.

Dr. N. K. Foster, Secretary of the California State Board of Health from 1901 to 1909, died last week at his home in Oakland. Dr. Foster laid the foundation for the present organization of the California State Board of Health and to him is due the credit for introducing many of the scientific public health procedures now used in health departments of California cities and counties. His contribution to the public health of this state is one of outstanding proportions. No single individual has ever accomplished more for the welfare of Californians than he.

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"There is a feeling present not only in nursing but in society in general that youth can not be trusted. A fundamental principle should be the appointment of youth to positions of responsibility that they may learn steadfastness and acquire interest."—Adda Eldredge.

MORBIDITY.*

Diphtheria.

56 cases of diphtheria have been reported as follows: Alameda 1, Berkeley 5, Oakland 3, Gridley 2, Pittsburg 1, Los Angeles County 2, Burbank 1, Glendale 1, Los Angeles 15, Pasadena 1, Monterey Park 1, Orange County 1, Santa Ana 2, Riverside County 1, Sacramento 6, San Bernardino 1, San Diego 1, San Francisco 5, Santa Clara County 1, San Jose 1, Santa Cruz 1, Watsonville 2, Vallejo 1.

Measles.

179 cases of measles have been reported as follows: Alameda County 4, Alameda 16, Berkeley 15, Oakland 43, Gridley 1, Oroville 1, Los Angeles County 1, Inglewood 1, Long Beach 1, Los Angeles 8, Pasadena 1, Monterey County 2, Salinas 2, Grass Valley 1, Santa Ana 1, Sacramento 1, San Diego County 1, Oceanside 1, San Francisco 50, San Joaquin County 2, Stockton 4, San Luis Obispo County 3, Santa Barbara 2, Santa Clara County 6, Palo Alto 1, San Jose 4, Santa Cruz 3, Sonoma County 1, Red Bluff 2.

Scarlet Fever.

65 cases of scarlet fever have been reported as follows: Alameda 1, Berkeley 5, Oakland 4, Pittsburg 1, Fresno County 2, Fresno 1, Kern County 3, Los Angeles County 2, Los Angeles 14, Manhattan Beach 1, Pomona 1, Marin County 1, Merced County 1, Merced 1, Brea 1, Fullerton 1, Santa Ana 3, San Bernardino 1, Chula Vista 2, San Diego 2, San Francisco 7, Stockton 2, Santa Clara County 2, San Jose 1, Sonoma County 1, Stanislaus County 1, Sutter County 1, Tulare County 1, Marysville 1.

Smallpox.

10 cases of smallpox have been reported, as follows: Los Angeles 1, Sacramento 1, Sonoma County 8.

Typhoid Fever.

17 cases of typhoid fever have been reported as follows: Alameda County 1, Kern County 1, Los Angeles 3, Redondo Beach 1, Santa Monica 1, Marin County 1, Riverside County 1, Sacramento County 1, San Bernardino County 1, San Francisco 1, Siskiyou County 1, Tulare County 1, California 3.

Whooping Cough.

51 cases of whooping cough have been reported as follows: Oakland 9, Fresno County 2, Los Angeles County 7, Alhambra 2, Long Beach 4, Los Angeles 6, Pasadena 6, Pomona 2, Whittier 1, San Diego 1, San Francisco 1, San Joaquin County 6, Santa Barbara 3, Sonoma County 1.

Epidemic Meningitis.

2 cases of epidemic meningitis have been reported, as follows: Inglewood 1, Burbank 1.

Epidemic Encephalitis.

Oakland reported one case of epidemic encephalitis.

Poliomyelitis.

6 cases of poliomyelitis have been reported as follows: Los Angeles 3, Pasadena 1, San Francisco 1, Stockton 1.

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*From reports received on September 13 and 14 for week ending September 11.

COMMUNICABLE DISEASE REPORT.

	1926				1925			
	Week ending			Reports for week ending Sept. 11 received by Sept. 14	Week ending			Reports for week ending Sept. 12 received by Sept. 15
	Aug. 21	Aug. 28	Sept. 4		Aug. 22	Aug. 29	Sept. 5	
Anthrax	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	0	0
Chickenpox	57	33	29	48	25	38	27	22
Diphtheria	47	80	90	56	77	61	62	53
Dysentery, Bacillary	2	6	0	1	1	1	2	1
Encephalitis, Epidemic	1	3	0	1	1	1	1	1
Gonococcus Infection	94	100	148	80	63	105	115	81
Influenza	5	6	6	5	6	8	2	4
Jaundice, Epidemic	0	0	0	0	0	0	0	0
Leprosy	0	0	0	0	0	1	0	1
Malaria	2	12	3	1	0	4	7	4
Measles	86	149	143	179	9	14	14	8
Meningitis, Epidemic	1	1	2	2	4	2	2	2
Mumps	51	73	60	53	49	39	47	35
Paratyphoid Fever	0	0	3	2	1	0	2	0
Pneumonia, Lobar	20	57	18	25	30	20	26	27
Poliomyelitis	7	3	4	6	38	44	28	17
Rabies (animal)	4	7	6	13	1	3	4	6
Rabies (human)	0	0	1	0	0	0	0	0
Rocky Mt. Spotted Fever	0	0	0	0	0	0	0	0
Scarlet Fever	49	68	66	65	39	41	33	34
Smallpox	5	4	7	10	31	14	24	14
Syphilis	97	68	164	81	80	81	247	127
Tetanus	1	3	0	2	3	1	1	2
Trachoma	1	7	1	3	5	5	2	1
Trichinosis	0	0	0	0	0	0	0	0
Tuberculosis	193	173	174	129	141	186	160	125
Typhoid Fever	28	31	21	17	46	32	35	14
Typhus Fever	0	0	0	0	0	0	0	0
Whooping Cough	26	61	43	51	134	94	79	60
Totals	777	945	989	830	784	795	920	639

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